

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re: Buras

Serial No.: 10/749,898

Confirmation No.: 8192

Filed: December 31, 2003

For: Process for Preparing Bitumen
Compositions with Reduced
Hydrogen Sulfide Emissions

§ Atty. Dkt. No.: COS-921

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§ Group Art Unit: 1755

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§ Cust. No.: 25264

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§ Examiner: Brunsman

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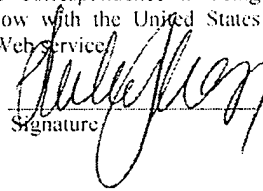
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Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Honorable Commissioner:

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1/27/2009 Date	 Signature

APPEAL BRIEF

Appellants submit this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 1793 dated September 23, 2008, finally rejecting claims 1, 3, 7, 9, 30 and 33.

Real Party in Interest

The present application has been assigned to Fina Technology Inc., P.O. Box 674412, Houston, Texas 77267.

Related Appeals and Interferences

Appellants assert that no other appeals, interferences or judicial proceedings are known to the Appellants, the Appellants' legal representative or Assignee that will

directly affect, be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 1-29 were originally presented in the application. Claims 2, 5, 13-14, 18-21, 26 and 29 were cancelled and claims 30-35 were added in Response to an Office Action dated June 20, 2006. Claims 6, 8 and 24-25 were cancelled and claims 36-38 were added in Response to a Final Office Action (and submitted with a Request for Continued Examination) dated February 7, 2007. Claims 4, 10-12, 15-17, 22-23, 27-28, 31-32 and 34-38 were cancelled in Response to an Office Action dated December 27, 2007. Accordingly, claims 1, 3, 7, 9, 30 and 33 are pending in the application and stand rejected under 35 U.S.C. §103(a). The rejection of the pending claims is appealed. The pending claims are shown in the attached Appendix A.

Status of Amendments

No amendments have been made to the pending claims in Response to the Final Office Action.

Summary of Claimed Subject Matter

Independent claim 1 recites a method of preparing asphalt comprising adding from 0.05 wt.% to 3.0 wt.% zinc oxide to asphalt wherein the zinc oxide reduces hydrogen sulfide emissions and adding a crosslinker to the zinc oxide, the asphalt or combinations thereof, wherein the crosslinker is selected from dithiocarbamates, alkyl polysulfides, ester polysulfides, and mixtures thereof. *See*, specification, at least page 9, line 20 to page 11, line 32 (paragraphs 29-31).

Grounds of Rejection to be Reviewed on Appeal

1. The rejection of claims 1, 3, 7, 9, 30 and 33 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,767,939 (*Butler*).
2. The rejection of claims 1, 3, 7, 9, 30 and 33 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,104,916 (*Trinh*).

Arguments

I. THE EXAMINER ERRED IN REJECTING CLAIMS 1, 3, 7, 9, 30 AND 33 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER *BUTLER*.

Butler teaches methods for preparing a bitumen and elastomeric polymer composition that is advantageous for concentrations of polymer greater than 4 percent. *See*, column 6, lines 61-67. A composition of crosslinking agents is introduced to the bitumen and polymer mixture. The crosslinking agents include three different crosslinking compositions formed of mercaptobenzothiazole, zinc oxide, sulfur, mixed polythiomorpholine, zinc-mercaptobenzothiazole and dithiodimorpholine, with little or no tetramethylthiuram disulfide or stearic acid. *See*, column 7, lines 7-14.

The Examiner acknowledges that the “difference between the instant claims and the examples of the patent is the use of MBT as a crosslinking agent...while the instant claims require one of dithiocarbamates, alkyl polysulfides and ester polysulfides”. *See*, page 3, second paragraph. However, the Examiner submits that “[p]aragraph [0031] of the instant specification admits that MBT and dithiocarbamates are known as conventional crosslinking agent for asphalt composition”. *See*, Final Office Action at second paragraph. Accordingly, the Examiner asserts that “[i]t would have been obvious to one of ordinary skill in the art to at least partially substitute a dithiocarbamate for the MBT of the reference because they are known to function equivalently.” *See, Id.* Appellants respectfully submit that the Examiner has taken such statement out of context. The instant specification recites that “at least a portion of, or optionally all of, a conventional sulfur-containing derivative...is replaced with an alkyl polysulfide...to reduce the emission of H₂S”. *See*, specification, paragraph 31. However, such statement does not teach that all conventional sulfur-containing derivatives are interchangeable.

The Examiner asserts that “[w]hile the zinc oxide is intended as a crosslinking promoter it is present in amounts which anticipate the ranges of the instant claims”. *See*, Final Office Action at page 3, first paragraph. Appellants disagree. As taught by the specification, it has been discovered that “an excess of metal salt...from what is normally used” (*e.g.*, for cross-linking purposes) “may inhibit the evolution or formation

of H₂S". See, paragraph 30. *Butler* does not teach, show or suggest adding from 0.05 wt.% to 3.0 wt.% zinc oxide to asphalt wherein the zinc oxide reduces hydrogen sulfide emissions, as recited by the pending claims. Rather, *Butler* teaches adding crosslinking compositions to asphalt.

Appellants submit that the replacement of MBT with the claimed crosslinking agents, in addition to an additional amount over the crosslinking compositions of zinc oxide, to result in an asphalt preparation process having reduced sulfide emissions is not capable of instant and unquestionable demonstration as being well-known. The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). There is no teaching in *Butler* that utilizing the zinc oxide in the amount taught by *Butler* for crosslinking, absent additional zinc oxide, will reduce hydrogen sulfide emissions, as required by the pending claims.

Therefore, reversal of the rejection is respectfully requested.

II. THE EXAMINER ERRED IN REJECTING CLAIMS 1, 3, 7, 9, 30 AND 33 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER *TRINH*.

Trinh teaches a vulcanization composition for elastomers comprising mercaptobenzothiazole, tetramethylthiuram disulfide, zinc oxide, stearic acid, anti-oxidant and vulcanization agent. See, Abstract.

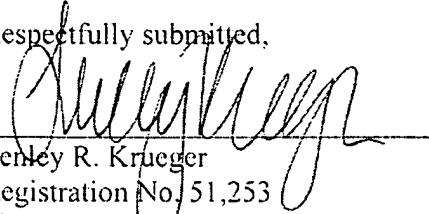
The Examiner sets forth the same type of rejection for *Trinh* as for *Butler*. A thorough discussion of such rejection is detailed above and repeating such argument is not deemed necessary. Based on the previously presented arguments, Appellants respectfully request reversal of the rejection.

Conclusion

In conclusion, the references of record nowhere teach, show or suggest adding from 0.05 wt.% to 3.0 wt.% zinc oxide to asphalt, wherein the zinc oxide reduces hydrogen sulfide emissions and adding a crosslinker to the zinc oxide, the asphalt or combinations thereof, wherein the crosslinker is selected from dithiocarbamates, alkyl polysulfides, ester polysulfides and mixtures thereof, as recited in the pending claims.

Thus, Appellants respectfully request reversal of the rejections of claims 1, 3, 7, 9, 30 and 33.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Tenley R. Krueger', written over a horizontal line.

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Appendix A

Pending Claims

1. A method of preparing asphalt, comprising:
adding from 0.05 wt.% to 3.0 wt.% zinc oxide to asphalt wherein the zinc oxide reduces hydrogen sulfide emissions; and
adding a crosslinker to the zinc oxide, the asphalt or combinations thereof, wherein the crosslinker is selected from dithiocarbamates, alkyl polysulfides, ester polysulfides, and mixtures thereof.
3. The method of claim 1 where the hydrogen sulfide emission is reduced to about 50 ppm or lower.
7. The method of claim 1 wherein at least one additional crosslinker is added and is selected from the group consisting of elemental sulfur, mercaptobenzothiazole (MBT), thiurams, mercaptobenzimidazole, dithiodimorpholine, and mixtures thereof.
9. The method of claim 1 further comprised of adding aggregate to the asphalt.
30. The method of claim 1 where the hydrogen sulfide emission is reduced to about 10 ppm or lower.
33. An asphalt made by the method of claim 1.

Appendix B

Evidence

1. *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

Appendix C
Related Proceedings

Not Applicable

Page 900
733 F.2d 900
221 U.S.P.Q. 1125
In re Lucas S. GORDON and Karl M. Sutherland.
Appeal No. 83-1281.
Serial No. 124312.
United States Court of Appeals,
Federal Circuit.
May 10, 1984.

James W. Geriak, Los Angeles, Cal., argued for appellants. With him on brief was Bradford J. Duft, Los Angeles, Cal.

John F. Pitrelli, Arlington, Va., argued for appellee. With him on brief were Joseph F. Nakamura, Sol. and John W. Dewhirst, Associate Sol., Washington, D.C.

Before BENNETT, Circuit Judge, SKELTON, Senior Circuit Judge, and MILLER, Circuit Judge.

JACK R. MILLER, Circuit Judge.

This appeal is from the decision of the United States Patent and Trademark Office ("PTO") Board of Appeals ("board") affirming the examiner's rejection of appellants' claims 1-3 and 5-7 as unpatentable under 35 U.S.C. Sec. 103. We reverse.

THE INVENTION

Appellants claim a "blood filter assembly" used during surgery and other medical procedures involving the handling of blood to remove clots, bone debris, tissue, or other foreign materials from blood before it is returned to a patient's body. Unlike blood filter assemblies widely used in the prior art, the device of the present invention permits both entry of the blood into, and ultimate discharge of the blood out of, the bottom end of the filter assembly, as shown below. 2

NOTE: OPINION CONTAINS TABLE OR OTHER DATA THAT IS NOT VIEWABLE

The blood filter assembly comprises a shell 1 provided with blood inlet 3 and blood outlet 4. Between the blood inlet and the blood outlet is filter medium 6 positioned within the filter medium core 7.

The location of blood inlet 3 is such that the incoming blood is directed along a spirally upward path by the inner wall of the shell. Further, the location of the blood inlet at the bottom end of the filter assembly facilitates the removal of gas bubbles by allowing them to rise upwardly out of the blood. The gas bubbles so removed are released from the blood filter assembly by means of a gas vent 5 located in the region of the top end of the assembly.

Independent claim 1, from which the other appealed claims depend, is illustrative:

Blood filter assembly comprising:

- a. a shell having a first top end and a second bottom end,
- b. a blood inlet located in the region of said bottom end and opening into said bottom end,
- c. a blood outlet located in the region of said bottom end,
- d. a gas vent located in the region of said top end, and
- e. a blood filter medium located between said blood inlet and said blood outlet,

said blood inlet being located and configured in a manner capable of directing incoming blood in a generally spiral path within said shell.

Claims 2, 3, and 5-7 further define the shape of the shell, the shape of the filter medium, and the nature of the material used as the filter medium.

PRIOR ART

The sole reference relied upon by the board is United States Patent No. 1,175,948, issued March 21, 1916, to French. French discloses a liquid strainer for removing dirt and water from gasoline and other light oils. As shown below, the inlet 4 and outlet 5 of the French device are both at the top end of the device.

NOTE: OPINION CONTAINS TABLE OR OTHER DATA THAT IS NOT VIEWABLE

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A continuous helical tooth or thread 8 is formed integral with the inner wall of shell 1 and imparts to the incoming liquid a whirling motion, which gives the liquid a scouring action to help clean the surface of a metal screen filter 21 and guides unwanted dirt and water downwardly into a pocket 9 in the bottom of the shell. A pair of shelves 10 and 11, projecting inwardly and downwardly from the inner wall of the shell, further assists the entrance of dirt and water into the pocket 9 and prevents their being drawn back into the main chamber 12. The reference expressly states, "gravity assists in the separation of heavier oils or water." A pet-cock 13, projecting vertically downward from the bottom of the pocket is used to remove the collected dirt and water periodically. The top of the liquid strainer is completely closed by gland 3 except for the inlet and outlet openings.

BOARD OPINION

The board held that the appealed claims were drawn to an apparatus which "would have at least been rendered prima facie obvious to one of ordinary skill in the art by the apparatus disclosed in French." The board's reasoning was that it would have been obvious to turn the French device upside down to have both the inlet and outlet at the bottom, rather than at the top; and to employ French's "pet-cock" as the claimed "gas vent." In the board's opinion, no patentable distinction was created by viewing French's apparatus from one direction and the claimed apparatus from another.

ANALYSIS

We are persuaded that the board erred in its conclusion of prima facie obviousness. The question is not whether a patentable distinction is created by viewing a prior art apparatus from one direction and a claimed apparatus from another, but, rather, whether it would have been obvious from a fair reading of the prior art reference as a whole to turn the prior art apparatus upside down. French teaches a liquid strainer which relies, at least in part, upon the assistance of gravity to separate undesired dirt and water from gasoline and other light oils. Therefore, it is not seen that French would have provided any motivation to one of ordinary skill in the art to employ the French apparatus in an upside down orientation. The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. See *Carl Schenck, A.G. v. Nortron Corp.*, 713 F.2d 782, 787, 218 USPQ 698, 702 (Fed.Cir.1983), and *In re Sernaker*, 702 F.2d 989, 995-96, 217 USPQ 1, 6-7 (Fed.Cir.1983), both citing *In re Imperato*, 486 F.2d 585, 587, 179 USPQ 730, 732 (CCPA 1973).

Indeed, if the French apparatus were turned upside down, it would be rendered inoperable for its intended purpose. The gasoline to be filtered would be trapped in pocket 9, and the water French seeks to separate would flow freely out of the outlet 5. Further, unwanted dirt would build up in the space between the wall of shell 1 and screen 21, so that, in time, screen 21 would

become clogged unless a drain valve, such as pet-cock 13, were re-introduced at the new "bottom" of the apparatus. See In re Schulpen, 390 F.2d 1009, 1013, 157 USPQ 52, 55 (CCPA 1968). In effect, French teaches away from the board's proposed modification.

Because the PTO has failed to establish a prima facie case of obviousness, the rejection of claims 1-3 and 5-7 as unpatentable under 35 U.S.C. Sec. 103 must be reversed. 3

REVERSED.

1 In application Serial No. 124,312, filed February 25, 1980, for a "Blood Filter."

2 Extraneous numbers have been removed from this and the subsequent drawing for clarification.

3 Because our holding that the PTO has failed to establish a prima facie case is dispositive, it is unnecessary to reach other arguments raised by appellants.